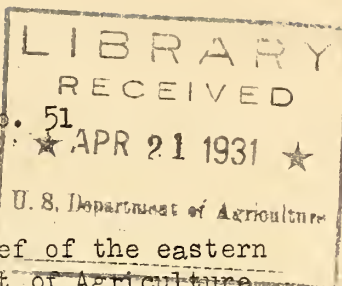


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April 20, 1931



A series of radio talks by W. R. M. Wharton, chief of the eastern district, Food and Drug Administration, U. S. Department of Agriculture, broadcast Monday mornings at 10 A.M., through Station WJZ, New York, and associated National Broadcasting Company stations.

Good morning, my radio friends, I am your government representative who comes to you each week to tell you how your foods and drugs are safeguarded through the enforcement of the Federal food and drugs act, and to tell you how to read labels in order that you may become careful, exacting, discriminating, and economical buyers.

My story today concerns an effort which was very recently made to import a large lot of misbranded macaroni into the United States. You know, now, that the Federal food and drugs act prevents the importation of adulterated and misbranded foods and drugs. Well, recently a shipment comprising nearly 9,000 packages of a macaroni-like product arrived at one of the largest Atlantic seaboard ports. The labels on these packages declared that the product was made wholly and entirely from gluten. The label went on to say that the macaroni was especially valuable for babies, and for diabetic, fleshy, and consumptive persons. Each package was accompanied by a circular containing many alleged testimonials, by individuals who signed themselves as professors and doctors, and who, in pseudo-scientific and exaggerated terms, praised the product for its health-giving and curative values.

Well, we detained this macaroni at the port. Samples of the product were collected and chemical examination showed it to be nothing more than plain, simple macaroni. It was not an all-gluten product. Everyone of the statements of health-giving and curative qualities was absolutely false. The interesting part of this experience is that after the goods had been detained and refused entry, the importer called on your speaker and made a special appeal for permission to import the macaroni. He said failure to receive the shipment would mean a great financial loss to him, since he expected to sell it for 50 cents a pound. He could have done so, too, under the claim that it was an all-gluten product with marvelous curative qualities.

There was apparently no secret about his intention to swindle the public, since, even after I told him it was just common macaroni worth less than 10 cents a pound, he still begged to be allowed to import the goods for sale as all-gluten macaroni - claiming to cure consumption - at 50 cents per pound.

Your food and drugs act was designed to prevent just this sort of fraud. Naturally, the product was not allowed to be sold to you under any such false representations. It is, my friends, by action such as this that the enforcement of your food and drugs act protects your food and drug supply.

My read-the-label subject today is food fads. It is human nature for the species homo to follow fads, and faddism has invaded the realms of diet to a greater extent perhaps than any other field. Individuals become imbued with the idea that this or that food product is the cure for all the aches, pains, discomforts and human ills; or that the addition of this or that item of food to the diet will guarantee health, long life, prosperity, happiness and whatnot. The kinds of faddists are legion. There are the vegetarians, the raw-meat eaters, the exclusive nut-eaters. The whole-wheat-bread and bran eaters are many, and the ground-alfalfa tribe is growing. Moreover, the advocates of various systems of eating have a large clientele.

Now, my friends, practically every food fad is based upon a fragment of truth, but food faddism really carries elements of truth to limits of absurdity. The point for the label readers to know is that the human tendency to follow fads is commercialized and exploited. We find all kinds of food products being offered for sale as health foods, and all kinds of dietary systems being urged as the remedy of all human ills.

There is no single food product which of itself constitutes a perfect food. Milk, perhaps, comes nearer to being a complete food than any other, but milk is woefully deficient in one of the menereal constituents which is absolutely essential for health and well-being, and that is iron. Milk is also devoid of indigestible residue - or roughage - a certain amount of which is essential to the proper functioning of the lower intestine, except in the case of infants. Therefore, when you know that no single item of food, when used alone, will support all of the functions of growth, life and human well-being - then you can properly evaluate any label claims of health-giving or curative or dietary corrective benefits of any single article of food. When you know the elements of proper nutrition, you can properly measure the various faddist systems of diet which generally involve the expenditure of money for a persuasive book, with subsequent perpetual necessity of buying diet charts. When you learn how to eat enough of a sufficient variety of foods in the proper proportions to give you the needed quantity of protein, carbohydrates, fats, vitamins, minerals, and other nutritional essentials to permit the body to develop, repair itself and operate - then you will not have any reason to follow food fads or spend your money for so-called health foods or diet charts.

The advocates of health foods, life grains, and other special food products, for which the makers claim curative or health-giving properties; and the advocates of special systems of diet, are all seeking to make money. And in their merchandizing efforts, they make statements which lead consumers to believe that the ordinary diet is sorely deficient in this or that food necessity. Pictures are painted of the alleged dire results which follow some alleged diet deficiency. But correction is promised if you will only buy this or that so-called life-giving grain, fruit, water concoction, or diet system. If you buy such products you will largely waste your money.

I am trying to show you that you must minimize the importance of claims which promise health from the use of any particular food product, for



no single product of food can be relied upon to restore or maintain the health of any individual. Make a study of the food requirements of your family - do this on a scientific basis - consult the real authorities - and then select foods for your family on a scientific basis to meet all the body needs. Do not feed your family according to the recommendation of some manufacturer of a specific product or of someone who is employed to advocate this particular product for the manufacturer.

Here are some grossly exaggerated, largely false and misleading expressions I have selected from recent claims made by manufacturers of proprietary foods: "Builds up your tissues". "How you can rejuvenate in your own kitchen". "Aids digestion and encourages growth". "Energizes the nerves and makes rich blood". "Your blood stream and glands will become charged with new life". "A natural remedy for constipation". "The new health sugar". "Energy and tissue building". "Recommended by the leading health physicians". "Builds brain nerves and muscle tissue". "The miracle food". "Enters and enriches the blood". "The ideal food". "The ideal energy-builder". "A red blood maker". "Increase your vitality, health and beauty - adds years to your life". "Gives you buoyant health". "Natures way to perfect health". "Most healthful of all foods".

Most of these statements are false, all of them are misleading, some are true in a very limited way, but the same thing is equally true of just the ordinary food that comes to your table.

Special diet in most cases of disease is essential and the simpler conditions of stomach disorders are amenable to proper diet. On the other hand, diet alone confers little benefit in the treatment of disease in general. The prescription of one particular diet for all individuals is ridiculous.

One of the greatest fallacies - and there are many, many food fallacies being advocated for commercial purposes these days - is that whole wheat bread will cure all our ills and correct all of our diet deficiencies. Whole wheat bread is often desirable in the diet; but it is not a satisfactory source of several of the essential food elements. It is not as satisfactory a diet, in general, as white bread and vegetables, including leafy ones. Whole wheat and bran are high in cellulose or roughage. Roughage may be what you need. If so, eat whole wheat or bran but do not neglect other necessary foods at the same time. And remember that too much roughage may be dangerous. Cases have been reported where serious stomach disorders have resulted, especially in children, from irritation from excessive use of whole wheat and bran products.

Experts have demonstrated that, for proper nutrition, it is desirable for most people to consume proper amounts and proper proportions of protein, fat, carbohydrates, mineral-food elements, vitamins, and certain other food constituents at present considered to be of less importance. It is impossible to state any exact rule of quantitative dietary requirements which would apply to all individuals. As an indication, let us consider that the average adult male in good health, weighing about 150 pounds, engaged in moderate activities, requires a daily intake of 3-1/2 ounces of protein, 17-1/2 ounces of carbohydrates, and 3-1/2 ounces of fat. We must remember, however, that there are variants. Eskimos have lived on diets practically devoid of carbohydrates,

and rich in fats, for generations. And yet there is little evidence to show that fat, in the average diet, is necessary at all. Average children require less of these food elements, in proportion to age. Average growing lads sometimes require more. The average woman requires about five-sixths as much as the average man and adults engaged in heavy labor require up to 30 per cent more. After the fortieth year of life, when less energy is required, it is probably advisable to reduce the protein intake.

Since our average man weighs 150 pounds, his protein requirement, 3-1/2 ounces per day, will mean approximately one ounce for each 43 pounds of body weight.

Protein builds new and repairs old tissue. It occurs in foods in various percentages. Meat, fish, eggs, poultry, cheese, beans, lentils, peas, and nuts are rich in protein. Cereals contain a moderate amount, while vegetables and fruits are generally low in protein. Solely to illustrate the quantity idea, I may say that if our average man should have to rely on fish, meat, beans, nuts, or a combination of these, for his daily protein, he would eat a total of one pound. If he should rely on milk alone, 3 quarts would be required. The protein of various foods differs in nutritional value. Proteins of meats, fish, fowl, milk, eggs, cheese, nuts, are known as efficient proteins. McCollum, an authority on diet, says milk, liver, and kidney stand out as a group of foods containing protein of unusual value.

Carbohydrates play the part in the diet of furnishing fuel and of storing fat. All foods which are starchy or sweet contain carbohydrates. All of the cereals contain starch. Many different kinds of sugars occur in foods. Fruits are relatively high in sugar. Sugar, starch, cereals, potatoes, and bananas are high in carbohydrates. Meats, fish, eggs, and similar products contain very small amounts of carbohydrates. Because the quantity of carbohydrates in various foods varies, in order for our average man to secure 17-1/2 ounces of carbohydrates per day, he will have to vary the quantity of intake, depending upon the kind of foods employed. Purely for the sake of illustration, it may be said that if Mr. Average Man relies upon bread alone, it will be necessary for him to consume about 2 pounds of bread per day. If he relies upon potatoes alone, he will have to eat 4-1/4 pounds per day. On the other hand, if he relies upon sugar alone, 17-1/2 ounces will be necessary, since sugar is 100-per-cent carbohydrates. Sugar should not be relied upon entirely for the carbohydrate requirements - indeed, experts say that sugar should not constitute more than one-third of our carbohydrate requirements.

Fat furnishes fuel and stores energy. In order to secure 3-1/2 ounces of fat per day our average man must use various quantities of different foods, since fat occurs in certain foods to a greater or lesser extent and in others practically not at all. Table oils, lard, suet, butter, fat meats, chocolate, nuts, cream, and eggs, contain liberal amounts of fat. For example, olive oil contains practically 100% fat; butter 80% or more, chocolate and nuts about 50%, cream about 20%, and milk, 3-1/2%. Cereals contain only small amounts of fat. Fruits and vegetables, except olives and avocado pears, contain unappreciable amounts of fat.



If our average man relies upon butter for his fats, he must eat about 4-1/2 ounces per day. If he relies on chocolate alone, he will need to eat 7 ounces.

Now, if Mr. Average Man selects his daily food with the idea only of securing adequate protein, carbohydrates, and fats, he will make a mistake. He must choose with the additional purpose of securing adequate vitamins, bulk and mineral salts. My previous talk, No. 13, deals with Vitamins, and I shall not discuss them further.

Investigators have definitely determined that for proper nutrition there should be an intake of definitely sufficient quantities of the salts of iron, copper, calcium, phosphorus, magnesium, sodium, potassium, and iodine. Foods contain various salts of these minerals in different amounts.

Iron is an essential element of the blood and body cells. Foods rich in iron are: Lentils, molasses, oysters, oat meal, spinach, prunes, dried figs, dates, eggs, lean beef, olives, raisins, lima beans, peas, currants, dried apricots, whole wheat, and green vegetables.

Dr. H. C. Sherman has shown that the average adult needs 3/4 of one milligram of iron for each 100 calories of intake of food, therefore our average adult male should receive 22-1/2 milligrams of iron per day.

If Mr. Average Man relies on lentils alone for his daily iron, he will need to eat 9 ozs. per day. If he relies alone on molasses he will eat 10-1/2 ozs. If he relies on oysters he will eat 18 ozs. per day, and the same applies approximately to oatmeal, and spinach. If he relies on dried figs, prunes, dates, eggs, and lean beef, he will eat a combination of these, amounting to slightly over 1-1/2 lbs. per day. Oranges, milk, butter, and apples contain relatively small amounts of iron and Mr. Average Man, if he relies on these foods alone, will need to eat 22 lbs. per day in order to get his iron requirement.

Minute quantities of copper seem to be necessary in the diet. However, practically all foods that reach our tables contain traces of copper, undoubtedly in quantity sufficient to meet our needs. Foods relatively rich in copper are wheat germ, almonds, oats, red kidney beans, rye, peas, asparagus, corn, lentils, barley, and oysters and other shell fish.

Calcium is necessary for building teeth and bone. It is irregularly distributed in foods. Foods relatively rich in calcium are milk, cheese, carrots, cabbage, turnips, oranges, prunes, beets and apples.

Phosphorus is essential for the proper functioning of tissue and blood cells. This element also has the same bone- and teeth-building value as calcium. Foods relatively rich in phosphorus are milk, egg yolk, cheese, whole wheat, beans, oatmeal, lean beef, nuts, and many fruits and vegetables.

Magnesium, sodium and potassium are necessary to maintain the proper salt balance in the body fluids. Foods in general contain sufficient magnesium and potassium, in so far as is now known, for ordinary body needs.

Nutritional needs for sodium are largely supplied by the use of table salt.

Iodine is considered essential for the proper functioning of the thyroid gland. Iodine occurs in many vegetables, especially those grown near the sea. Iodine also occurs in some drinking water. In certain sections, it is necessary to add iodine to table salt or to drinking water. Deficiency in iodine in the diet results in a condition of the thyroid gland, resulting in one form, but one only, of goiter. But self-medication, when goiter exists, is about as dangerous a practice as the layman may attempt.

Many foods contain a structural material, or skeleton, composed of cellulose, which is called fiber. Foods high in fiber are called bulky foods. This material is largely indigestible and is eliminated so that the foods high in cellulose or structural material are referred to as bulk formers, or as containing roughage.

My friends, this is a brief and incomplete summary of the known facts about nutrition. I have given it because, by knowing these facts, you will know better how to read food labels. You know I am committed to the task of teaching the consumers of the Nation to read labels intelligently, and I am trying very seriously to do just this, in order that you may derive all the benefit which will result.

You may secure copies of all my radio talks simply by asking for them. Address your requests to W. R. M. WHARTON, United States Department of Agriculture, 201 Varick Street, New York City.